BIORUŽA, s. r. o.

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CERTIFICATE of ANALYSIS (COA)

COMMON NAME	Grapefruit, Pink
LATIN NAME	*Citrus paradisi*
COUNTRY OF ORIGIN	Italy
CULTIVATION METHOD	Conventional
TYPE	Essential Oil
EXTRACTION METHOD	Cold Pressed
PLANT PART	Peels
USE	Aromatherapy, Natural Perfumery

LOT #	42
MANUFACTURING DATE	May 2025
RETEST	May 2027

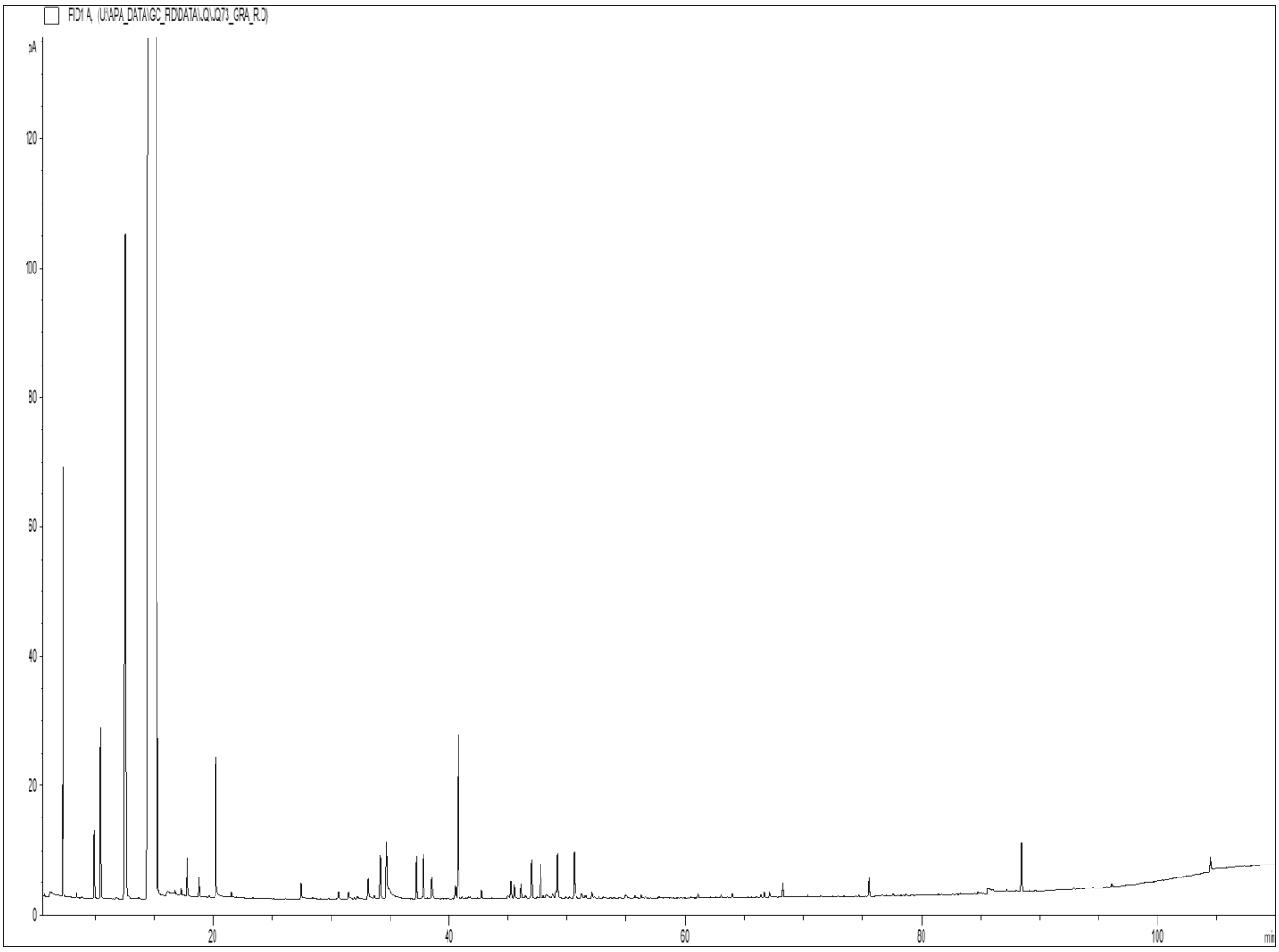
	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @25˚C	0.8520 - 0.8600	0.85278
REFRACTIVE INDEX @20˚C	1.4740 - 1.4790	1.4762
OPTICAL ROTATION @20˚C	+91.00˚ to +96.00˚	+95.20˚

PHYSICAL APPEARANCE	Transparent liquid	*Conforms*
COLOR	Pale golden to orange	*Conforms*
ODOR	Sweet, equally tart, with a soft citrus note.	*Conforms*
SOLUBILITY	Soluble in alcohol and fixed oils	
SPECIAL USE INSTRUCTIONS	Dilute before use. Refrigerate to preserve freshness.	

PRIMARY CONSTITUENTS	Limonene, Myrcene.

THIRD PARTY LAB ANALYSIS (GCMS)

CHROMATOGRAPHIC PROFILE:



- GRAPEFRUIT PINK EO - LOT 42 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
1	7.27	**alpha-PINENE**	**0.55**	**0.20 - 0.60**	
2	9.94	**beta-PINENE**	**0.14**	**0.05 - 0.20**	
3	10.51	**SABINENE**	**0.34**	**0.10 - 0.60**	
4	12.60	**beta-MYRCENE**	**1.99**	**1.5 - 2.5**	
5	15.21	**LIMONENE**	**94.44**	**92.0 - 96.0**	94.44
6	15.33	beta-PHELLANDRENE	0.30		
7	17.36	gamma-TERPINENE	0.01		
8	17.82	trans-beta-OCIMENE	0.06		
9	18.82	p-CYMENE	0.03		
10	20.27	**OCTANAL**	**0.25**	**0.20 - 0.80**	
11	21.58	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0.01		
12	27.47	**NONANAL**	**0.03**	**0.04 - 0.10**	
13	30.63	LIMONENE cis-1,2-EPOXIDE	0.01		
14	31.51	LIMONENE trans-1,2-EPOXIDE	0.01		
15	33.18	CITRONELLAL	0.05		
16	34.21	alpha-COPAENE	0.09		
17	34.69	**DECANAL**	**0.23**	**0.10 - 0.60**	
18	37.25	beta1-CUBEBENE	0.08		
19	37.81	LINALOOL	0.07		0.07
20	38.51	1-OCTANOL	0.06		
21	40.51	beta-ELEMENE	0.03		
22	40.76	**beta-CARYOPHYLLENE**	**0.32**	**0.20 - 0.50**	
23	42.70	cis-p-MENTHA-2,8-DIEN-1-OL	0.02		
24	44.99	CITRONELLYL ACETATE	0.01		
25	45.23	alpha-HUMULENE	0.04		
26	45.49	E-beta-FARNESENE	0.03		
27	46.10	**NERAL**	**0.03**	**0.02 - 0.04**	0.03
28	47.01	alpha-TERPINEOL	0.08		
29	47.73	GERMACRENE D	0.07		
30	48.22	DODECANAL	0.02		
31	48.78	alpha-MUUROLENE	0.01		
32	49.05	BICYCLOGERMACRENE	0.01		
33	49.17	GERANIAL	0.09		0.09
34	50.58	delta-CADINENE	0.09		
35	50.65	GERANYL ACETATE	0.02		
36	52.09	PERILLALDEHYDE	0.01		
37	54.95	trans-CARVEOL	0.01		
38	61.08	CUBEBOL	0.01		
39	63.98	CARYOPHYLLENE OXIDE	0.01		
40	66.71	NEROLIDOL	0.01		
41	67.13	GERMACRENE D-4-OL	0.01		
42	68.22	ELEMOL	0.03		
43	75.58	beta-SINENSAL	0.04		

- GRAPEFRUIT PINK EO - LOT 42 -					
Peaks	**RT (min)**	**Compound name**	**%**	**Standard (%)**	**Allergens (%)**
44	88.48	**NOOTKATONE**	**0.11**	**0.01 - 0.80**	
45	104.46	PALMITIC ACID	0.03		
46	122.72	OSTHOLE	0.06		
47	127.73	BERGAPTEN	0.01		
		TOTAL	**99.97**		**94.64**

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